

Course: COMP.CS.140 Ohjelmointi 3: Rajapinnat ja tekniikat

Project: Sisu Unraveled

Language: English

Developers:

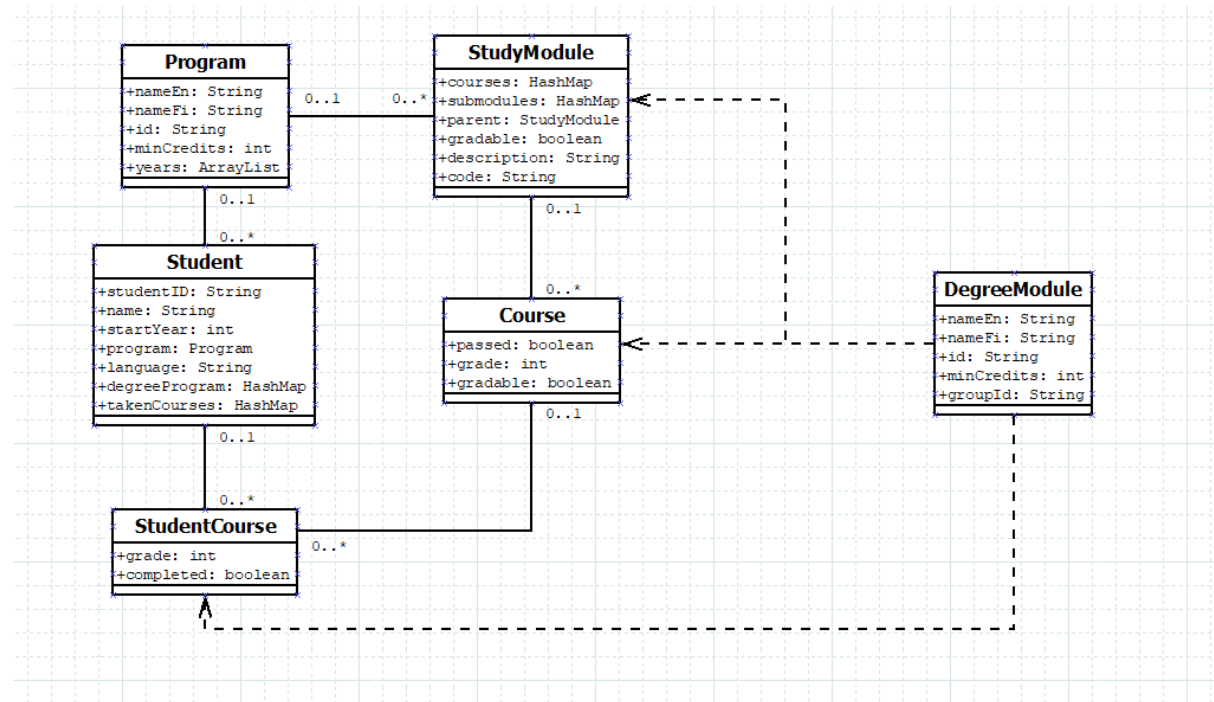
Hanna Haapanen hanna.m.haapanen@tuni.fi	Mariia Martus Mariia.martus@tuni.fi	Petri Kaukopuro petri.kaukopuro@tuni.fi
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Description

Sisu is a program for planning and keeping track of university studies. The program able users to investigate the degree structures of study programs at Tampere University. In addition, the user's progress over their studies can be viewed. The user can define their study program and mark courses to their study plan. The Study plan can be edited: courses can be dropped, completed, and graded. User can change language between Finnish and English. The user will have visual elements to demonstrate their progress.

Class Diagram

In picture 1 is the class diagram of Sisu unraveled program. Details about the class diagram are described below.



Picture 1: Sisu unraveled class diagram

Program

Program class represent a program object and contains basic data about degree program like id, name, minimum required grade etc. It is used mainly on the welcome screen and to provide id for the chosen program

StudyModule

A study module groups courses or other study modules as submodules together into groups. Study module completions can be included into a student's university study record. Study modules have information about e.g., name, code, study credits and grading. The class Implements the abstract DegreeModule class.

Course

Course Class is used to model a single course data with data like code, name, awarded study credits, course description. The class Implements the abstract DegreeModule class.

DegreeModule

An abstract class for storing information on StudyModules and Courses.

StudentCourse

StudentCourse Class represent a course about the student. Class extends class Course, adding there student grade and completion status.

Student

Student class represents student plan data. During the planning the class keep track of the user's actions like selected degree program and planned courses. It can use plan already stored in local workstation.

Use cases

Main use cases described below with pictures.

Create a new study plan

User will input their name, plan name, and select starting year and choose degree program in welcome screen

The screenshot shows a web form titled "Create a new plan". On the left, there is a dark blue sidebar with a button labeled "Continue from previous session". The main form area has a light blue background and contains the following fields: "Student name" with the value "Maija Mehiläinen", "Name your plan" with the value "Maija's Plan", "Starting year" with a dropdown menu showing "2022", and "Choose your degree" with a dropdown menu showing "Bachelor's Programme in Politics". At the bottom of the form is a button labeled "Start planning".

User will have a view of selected degree program study modules and courses.

Student can take a course into their plan.

User can drop or grade the course.

The screenshot shows a web interface for the "Bachelor's Programme in Politics 2023-2025". On the left, there is a dark blue sidebar with a pie chart showing "Planned 20/180", "Completed 0/180", and "Average grade 0.0". Below the chart are buttons labeled "Write to file", "Back", and "Quit". The main area has a light blue background and contains a list of courses. At the top, there are buttons for "Show all courses" and "en". The list of courses is organized into sections: "Bachelor's Programme in Politics 0/180", "Basic Studies in Politics 5/60", and "Optional Studies in Bachelor's Programme in Politics 0/80". The "Basic Studies in Politics 5/60" section contains a table of courses with columns for course name, credit value, and actions (Drop, Grade, Take course). The "Optional Studies in Bachelor's Programme in Politics 0/80" section contains a list of courses with checkboxes and a "Take course" button.

Course Name	Credits	Drop	Grade	Take course
Political Ideologies	5			
Introduction to Political Science	5			
Scientific Writing and Research Material in Political Studies	5			
Political Problems in Changing Contexts	5			
Introduction to International Relations	5			

Continue with existing study plan

User can select saved study plan from their workstation

User can continue editing the study plan like take courses into their existing plan, grade and drop courses.

General functionality of the app

User can choose in which language they want to see the study modules and courses.

User will see their progress in visual representation.

User can write their plan to file

User can go back and change their selections in start window

User can quit the app.